

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 20201WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/NL 03/00507	International filing date (day/month/year) 09.07.2003	Priority date (day/month/year) 19.07.2002
International Patent Classification (IPC) or both national classification and IPC C08F8/04		
Applicant DSM IP ASSETS B.V. et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 19.02.2004	Date of completion of this report 01.07.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Gold, J Telephone No. +49 89 2399-8413 

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International application No. **PCT/NL 03/00507**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

Description, Pages

1-13 as originally filed

Claims, Numbers

1-13 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-13
	No: Claims	
Inventive step (IS)	Yes: Claims	1-13
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations

see separate sheet

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Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Novelty and inventive step

The subject matter of claims 1-13 of the present invention is novel in the sense of Article 33(2) PCT and involves an inventive step according to Article 33(3) PCT.

- 1.1. No document cited in the International Search Report discloses a process comprising A) the hydrogenation of a polymer in latex in the presence of hydrazine, a oxidising agent and a catalyst, B) the separation of the hydrogenated polymer from the latex, C) addition of an amine compound to the hydrogenated polymer and D) mixing it with a compound reactive with the amine. The distinguishing feature of the process over the prior art documents D1-D3 is the addition of a reactant for amines which is able to react with said amine compounds.

The applicant demonstrated that polymers obtainable by said process are novel as such.

Thus the subject-matter of claims 1-9 is novel within the sense of Article 33(2) PCT.

- 1.2. The problem to be solved is to provide rubbers having superior properties with regard to compression set, heat resistency and chemical resistency and a method for making them.

The applicant solved the problem by the distinguishing feature.

In no cited prior art document D1-D3 incentives to such a problem solution were given. Thus inventive step (Article 33(3) PCT) is given for the product and process claims 1-9.

- 1.3. Automatically the use of said products and articles formed thereof fulfill the requirements of novelty and inventive step (Article 33(2) and (3) PCT), too.

2. Clarity

2.1. Claim 6

There exists a contradiction in claim 6. Claim 6 refers to amines according to formula (II), but this formula (II) encloses in cases where neither X nor Y are amino groups also compounds which are no amines (for X=H, OH or SH and Y=OH or SH).

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2.2. Claims 10 and 11

Claims 10 and 11 are formulated in an unclear way. Claims 10 and 11 should refer back only to the product claim 9 in order to fulfill the requirements of clarity according to Article 6 PCT.

2.3. The applicant is informed that said unclarities should be clarified during the EP-phase.

3. Industrial applicability

Industrial applicability of the invention according to Article 33(4) PCT is given in the field of rubber technology.